

# Lecture #13

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## Continuous Probability Distributions

### Uniform Distribution

- bounded at both low and high ends
- “uninformed” prior

### Normal Distribution

- unbounded
- symmetric
- separate parameters for mean and variance
- problematic if mean is small and negative values are not possible

### Gamma Distribution

- bounded by zero, positive values only
- asymmetric with long right-hand tail
- shape and scale parameters that together determine mean and variance
- $mean = shape * scale$
- $variance = shape * scale^2$